Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A controllable rectifying element, comprising a bipolar transistor having a current input terminal connected to a control terminal by a first switch and having a current output terminal directly connected to the control terminal by a second switch, the turn-off and turn-on phases of the first and second switches being complementary and depending on the state desired for the rectifying element.

2. (Original) The rectifying element of claim 1, further comprising a circuit for controlling the first and second switches according to the state of a signal for enabling/disabling the rectifying element.

3. (Original) The rectifying element of claim 1, wherein said switches are formed of P-channel MOS transistors having their respective gates connected to the control terminal of the bipolar transistor via current sources.

4. (Original) The rectifying element of claim 2, wherein said switches are formed of P-channel MOS transistors having their respective gates connected to the control terminal of the bipolar transistor via current sources.

5. (Original) The rectifying element of claim 4, wherein the control circuit comprises two N-channel MOS transistors connecting the respective gates of the P-channel MOS transistors to ground, said N-channel MOS transistors being respectively controlled by the enable signal and by its inverse.

6. (Original) The rectifying element of claim 1, wherein said bipolar transistor is a PNP transistor.

7. (Original) The rectifying element of claim 1, wherein said bipolar transistor is an NPN transistor.

8. (Original) A voltage converter of D.C./D.C. type comprising the rectifying element of claim 1.

9. (Currently Amended) A rectifying circuit comprising:

a supply transistor having an input terminal, an output terminal and a control terminal;

a first switch for selectively coupling the input terminal of the supply transistor to the control terminal of the supply transistor;

a second switch for selectively coupling the output terminal of the supply transistor to the control terminal of the supply transistor; and

a control signal line coupled to the first and second ~~switching elements~~ switches that selectively enables one of the ~~switching elements~~ switches to connect the respective terminals to the control terminal and disables the other of the ~~switching elements~~ switches from connecting their respective terminal to the control terminal.

10. (Original) The rectifying circuit according to claim 9 wherein the supply transistor is a bipolar transistor.

11. (Original) The rectifying circuit according to claim 9 wherein said first and second switches are composed of MOS transistors.

12. (Original) The rectifying circuit according to claim 10 further including an inverter positioned between the control signal line and the first and second switches, respectively, ensuring that the two switches are in opposite states at all times.

13. (Original) The rectifying circuit according to claim 12, further including:

respective MOS transistors coupled to control gates of the first and second MOS transistors acting as the switches, the inverter being coupled to the gate of one of the additional MOS transistors and not to the gate of the other additional MOS transistors.

14. (Original) The rectifying circuit according to claim 9, further including first and second current sources extending from the control terminal of the supply transistor to respective gate terminals of the MOS transistors acting as switches.

15. (Original) The rectifying circuit according to claim 9, wherein said input control signal line provides an enable signal for switching the rectifier element on.

16. (Original) The rectifying circuit according to claim 9, further including an inductor coupled to the input of the supply transistor and a switching element coupled between the inductor and the input terminal to the supply transistor for selectively coupling the input of the supply transistor to the inductor output or to a voltage reference source.

17. (Original) The rectifier circuit according to claim 16, wherein said voltage reference source is ground.

18. (Currently Amended) The rectifying circuit according to claim 11 wherein the rectifier circuit is integrated onto a single silicon substrate and the area in silicon substrate occupied by the MOS transistors is smaller than the area ~~consumed~~ occupied by the supply transistor and the difference in area occupied is approximately proportional to the

expected current flowing through the supply transistor divided by the gain of the supply transistor.

19. (New) A rectifying circuit comprising:

a semiconductor substrate;

a power supply transistor formed in the semiconductor substrate, the power supply transistor having an input terminal, an output terminal and a control terminal;

a first switch in the semiconductor substrate, the first switch having one terminal coupled to the input terminal of the power supply transistor and another terminal connected to the control terminal of the power supply transistor, the area of the semiconductor substrate occupied by the first switch being substantially smaller than the area occupied by the power supply transistor;

a second switch in the semiconductor substrate, the second switch having a first terminal coupled to the output terminal of the power supply transistor and a second terminal connected to the control terminal of the power supply transistor, the area of the semiconductor substrate occupied by the second switch being substantially smaller than the area occupied by the power supply transistor; and

a control signal line coupled to the first and second switches to selectively enable one of the switching elements to connect the control terminal to the respective switch's first terminal and disable the other of the switches from connecting the control terminal to the respective switch's first terminal.

20. (New) The rectifying circuit according to claim 19 wherein the difference in the area occupied in the silicon substrate by the power supply transistor and the respective first and second switches is approximately proportional to the expected current flowing through the power supply transistor divided by the gain of the supply transistor.